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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,730	10/20/2005	Cornelis Kees Klein	080670-000000US	8870

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EXAMINER	
NUR, ABDULLAHI	
ART UNIT	**PAPER NUMBER**
2877	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/527,730	KLEIN, CORNELIS KEES	
	Examiner	Art Unit	
	Abdullahi Nur	2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 October 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *14 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/14/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 4-16, and 20-25 are objected to because of the following informalities: Claims recite apparatus or method. In claims 4-16, and 20-25, the wording " or method" should be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8,12-13,17-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Mathisen et al. (US Patent # 4,158,505) [hereinafter Mathisen].

As to claim 1,3 and 19, Mathisen teaches spectrophotometer comprising: a source 26 adapted to direct radiation at least at a sample 34, the radiation incident on or reflected by the sample able to be varied (column 1, line 65 to column 2, line 5); a detector 38 for detecting at least radiation reflected by the sample, wherein said detector having a spectral response able to be varied and an output depending on radiation incident thereon and said spectral response (column 1, lines 59-64); a controller or processor 12 receiving said output, configured or programmed to vary the intensity of said source (column 1, line 65-67); vary the spectral response of said detector (column 1, lines 59-64); and determine a characteristic of said sample based on said output in relation to said variations (column 17-21).

As to claims 2 and 18, Mathisen teaches an spectrophotometer comprising: means for directing radiation at said sample (column 4, lines 9-11), means for varying the radiation incident on or reflected by said sample (column 4, lines 7-9), means for detecting at least radiation reflected by said sample 38, means for varying the spectral response of said means for detecting (column 4, lines 7-9), means for providing an output representative of said detected reflected radiation 14 (display), and means for determining a characteristic of said sample based on said output in relation to said variations 12.

As to claim 4, Mathisen teaches all as applied to claim1, and in addition teaches an spectrophotometer wherein the radiation directed at said sample is varied by varying the voltage or current supplied to the radiation source (column 6, lines 6-29).

As to claim 5, Mathisen teaches all as applied to claim 1, and in addition teaches an spectrophotometer wherein the radiation directed at said sample is varied by varying the transmission path between the radiation source and said sample (column 15, lines 24-34).

As to claim 6 and 7, Mathisen teaches all as applied to claim 5, and in addition teaches an spectrophotometer wherein the transmission path is varied (by rotating wheel) by varying the size of the aperture through which radiation is directed at said sample (column 2, lines 14-20).

As to claim 8, Note that radiation on a sample inherently varies as the source varies between switch on and saturation (steady state).

As to claim 17, Mathisen teaches an spectrophotometer comprising: a source adapted 26 to direct radiation at least at said sample 34, a detector 38 configured to provide an output indicative of at least radiation reflected by said sample, a variable transmission path for radiation between said source (column 15, lines 24-34), said sample or said detector, configured to vary at least intensity of radiation incident on said sample (column 1, line 65 to column 2, line 5), a controller or processor 12 receiving said output and operating said transmission path, configured or programmed to determine the radiation reflected from said source off said sample, determine the radiation directly from said source (column 1, line 65 to column 2, line 5), and determine a characteristic of said sample based on said output in relation to variations in said transmission path (column 17-21).

As to claim 20, Mathisen teaches all as applied to claim 17, and in addition teaches an spectrophotometer wherein said radiation reflects off said sample along a sample path and radiation passes directly to the detector along a reference path (column 4, lines 6-36; Fig.2).

As to claim 21, Mathisen teaches all as applied to claim 17, and in addition teaches an spectrophotometer wherein a blocking member 32 having at least 3 cyclic modes a first mode during which said radiation passes said reference path, a second mode during which said radiation passes said sample path, and a third mode during which said radiation is blocked (column 2, lines 6-13; column 2, lines 33-37; Fig.2).

As to claim 22, Mathisen teaches all as applied to claim 17, and in addition teaches an spectrophotometer utilizing a rotary chopper wheel (column 2, lines 14-15).

As to claims 23 and 24, Mathisen teaches all as applied to claim 17, and in addition teaches an spectrophotometer that allows the radiation through the sample to vary as the opening of the chopper through which radiation passes change as a result of the rotating chopper.

As to claim 25, Mathisen teaches all as applied to claim 17, and in addition teaches an spectrophotometer wherein said blocking member includes indexing and a sensor(s) detect the position of said blocking member (column 4, lines 57-64).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 9-11are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathisen in view of Dyment (US Patent # 3,955,082).

As to claims 9-11, Mathisen teaches all as applied to claim 1, except for the varying width of the depletion zone of the diode by varying the reverse voltage; and that

the out put signal from the detector is amplified. Dyment teaches the varying width of the depletion zone of the diode by varying the reverse voltage (column 3, lines 23—25).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Dyment's teaching into Mathisen's in order to provide an out put signal from the detector of varied intensity.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an amplifier in order to amplify weak signal to appropriate and detectable level.

As to claim 12, Mathisen in view Dyment teaches all as applied to claim 11, and in addition Mathisen teaches an spectrophotometer wherein said controller is a microprocessor 12.

As to claim 13, Mathisen in view of Dyment teaches all as applied to claim 11, and in addition Mathisen teaches an spectrophotometer wherein said detector is a photodiode detector 38.

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mathisen in view of Dyment, and further view of Adams et al. (US Patent # 7,154,599 B2) [hereinafter Adams].

As to claims 14-16, Mathisen in view of Dyment teaches all as applied to claim 11, except for the light emitting diode, tungsten lamp, and gas discharge lamp. Adams teaches various light source including LED, discharge lamp or any other energy source (column 6, lines 22-39).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use various light sources including those claimed in order to provide wide range of radiation sources appropriate to the spectral analysis of the sample under test.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullahi Nur whose telephone number is (571) 270-1298. The examiner can normally be reached on Monday - Friday, 8 a.m. to 5p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley can be reached on 571-272-2059. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Abdullahi Nur AN

Patent Examiner

AU 2877

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